

CLAIMS

1. A diode 2 comprising a connecting means 6 and a heat sink base 7;

said connecting means 6 comprising a flat end 5 fixed at a die 16 and the other end having no fixed shape;

said heat sink base 7 comprising;

5 a base 18 which is on the bottom of the heat sink base 7;

a press-fit region 4 which is around said base 18;

a solder platform which is above said base 18;

a die 16 which has a first side and a second side electrically coupled to said flat end 5 and said solder platform 17, respectively;

10 a shoulder 12 which is extended acclivitously from said solder platform 17, the root of said shoulder 12 connected to said solder platform 17 having a kink; and

a cup 14 which is extended upwardly from the periphery of said base 18.

2. The diode 2 of Claim 1, wherein said shoulder 12 has a height which is substantially the same as said die 16.

3. The diode 2 of Claim 1, wherein said connecting means 6 is a lead wire.

4. The diode 2 of Claim 1, further comprises two solder layers 15a and 15b which sandwich said die 16 above and under, respectively.

5. The diode 2 of Claim 4, further comprises passive material 10 used to surround said wafer 16.

6. The diode 2 of Claim 5, further comprises an epoxy 8 for surrounding outside said passive material 10.

7. The diode 2 of Claim 6, further comprises a protective sheath 20 for surrounding said epoxy 8 inside said cup 14.

8. The diode 2 of Claim 6, further comprises a protective sheath 20 for surrounding said epoxy 8 outside said cup 14.